

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEW MEXICO**

BNSF RAILWAY COMPANY,

Plaintiff,

CIVIL NO. 06-1076 MCA/LFG

vs.

LAFARGE SOUTHWEST, INC.; STELLA R. VALENCIA, Personal Representative of the Estate of Robert J. Valencia; and GREGORY MARTINEZ and DARLENE COLEMAN, Personal Representatives of the Estate of Carol E. Duran,

Defendants.

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STELLA R. VALENCIA, individually, and as Personal Representative of the Estate of Robert J. Valencia, JOHN KELLY VALENCIA, DESIREE RICHELLE VALENCIA, STEPHANIE ESTELLE VALENCIA, and LILLIAN S. VALENCIA,

Counter Claimants/Cross-Claimants/
Third-Party Plaintiffs,

vs.

BNSF RAILWAY COMPANY, and DARLENE COLEMAN, Personal Representative of the Estate of Carol E. Duran,

Counter-Defendants/Cross-Defendants,

MIKE TAFT, d/b/a Taft Construction;
and EL PASO NATURAL GAS COMPANY

Third-Party Defendants.

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LAFARGE SOUTHWEST, INC.

Third-Party Plaintiff/Cross-Plaintiff

vs.

DARLENE COLEMAN, individually, and as Personal Representative of the Estate of Carol E. Duran; GREG GUTIERREZ and MATTHEW RAY DURAN, individually,

Plaintiffs,

vs.

BNSF RAILWAY COMPANY; LAFARGE SOUTHWEST, INC.; STELLA VALENCIA, Personal Representative of the Estate of Robert J. Valencia; MIKE TAFT, d/b/a Taft Construction; and EL PASO NATURAL GAS CO.,

Defendants.

MEMORANDUM OPINION AND ORDER

THIS MATTER comes before the Court on *The Duran Parties' Motion to Preclude Opinions of Theodore Davis, M.D. as Beyond his Qualifications* [Doc. 391], filed August 25, 2008.¹ Having considered the parties' submissions, the relevant law, and otherwise being fully advised in the premises, the Court denies the motion.

I. BACKGROUND

This action arises from a fatal collision between an eastbound freight train operated by Plaintiff BNSF Railway Company and a commercial dump truck that was being driven

¹Although it appears that this Motion has been rendered moot by the Court's ruling on *BNSF Railway Company's Motion for Reconsideration* [Doc. 624] *Deferring Ruling on BNSF's Sixth Motion for Partial Summary Judgment, Dismissing Certain Claims for Damages Based on Pain and Suffering* [Doc. 32], which ruling is filed concurrently herewith, the merits of the pending motion herein are nonetheless addressed for purposes of completeness.

by decedent Carol Duran. On November 1, 2006, Ms. Duran, a contractor for Defendant/Third-Party Plaintiff Lafarge Southwest, Inc., was delivering gravel to a construction site near the railroad tracks when, at the apparent direction of her supervisor, Lafarge employee and decedent Robert Valencia, she stopped her truck on a crossing on the tracks in order to speak with him. Both Ms. Duran and Mr. Valencia were killed as a result of the train colliding with Ms. Duran's fully loaded truck.

In the pretrial motion that is currently before the Court, the Duran parties seek to exclude the opinion of conclusion of Theodore Davis, M.D., that "Carol Duran was killed instantaneously by the impact of the train on the truck." [Doc. 391 at 3]. The Duran parties argue that Dr. Davis is not qualified to give such an opinion and that, even if he were so qualified, his opinion is not reliable.

II. ANALYSIS

A. Legal Standards

With few exceptions that are not raised in the briefing on the motion in limine at issue here, "[t]he admissibility of evidence in diversity cases in federal court is generally governed by federal law." Romine v. Parman, 831 F.2d 944, 944 (10th Cir. 1987). Thus, the Court applies the Federal Rules of Evidence in determining the admissibility of Dr. Davis' opinion about the effect on the consciousness of Ms. Duran and Mr. Valencia of the massive blunt force trauma they undisputedly sustained.

Rule 702 of the Federal Rules of Evidence imposes a special gatekeeping obligation on this Court to ensure that expert testimony is not admitted at trial unless it is both relevant

and reliable. See Kumho Tire Co., Ltd. v. Carmichael, 526 U.S. 137, 141 (1999); Daubert v. Merrell-Dow Pharm., Inc., 509 U.S. 579, 592–93 (1993). The relevance of such testimony also must be weighed against “the danger of unfair prejudice, confusion of the issues, or misleading the jury” as well as “considerations of undue delay, waste of time, or needless presentation of cumulative evidence.” Fed.R.Evid. 403. While the Court is not required to consider any particular set of factors or utilize a particular procedure in making such determinations with respect to expert testimony, the Court must make *some* kind of determination on the record in order to demonstrate that it has performed its gatekeeping function. See United States v. Velarde, 214 F.3d 1204, 1209 (10th Cir. 2000); Goebel v. Denver & Rio Grande W. R.R. Co., 215 F.3d 1083, 1088 (10th Cir. 2000). As part of its gatekeeping function, and in addition to determining whether the proposed expert is qualified to offer an opinion, the Court may also consider whether (1) the testimony is based upon sufficient facts or data; (2) the testimony is the product of reliable principles and methods; and (3) the witness has applied the principles and methods reliably to the facts of the case. Reliability under Daubert is determined by looking at whether the reasoning or methodology underlying the testimony is scientifically valid, and relevance is determined by whether that reasoning or methodology properly can be applied to the facts in issue. Smith v. Sears Roebuck and Co., 232 Fed.Appx. 780, 781 (10th Cir. 2007).

The Duran parties do not dispute the relevance of Dr. Davis’ opinion, and there is no question that his testimony is relevant to the issue of damages for conscious pain and suffering. Instead, the focus of the dispute is over whether Dr. Davis is qualified to render

an opinion regarding whether the injuries sustained by Ms. Duran and Mr. Valencia resulted in essentially instantaneous unconsciousness and whether his opinion meets Daubert principles of reliability. The Court addresses these issues below.

B. Dr. Davis' Qualifications and Opinion

1. Dr. Davis' Qualifications

Theodore Davis is a medical doctor licensed to practice in the states of New Mexico, South Carolina, Arizona, and Colorado. He graduated and received his M.D. from Emory University School of Medicine in 1976. He is board certified in emergency medicine, a medical subspecialty that involves the diagnosis, evaluation, and treatment of traumatic and non-traumatic conditions and disorders, and mechanism of injury assessment. Dr. Davis has been continuously board certified in emergency medicine since 1990, and maintains the necessary continuing education in that discipline. Physicians specializing in emergency medicine train in understanding the kinds of fatal and non-fatal effects that can result when the human body is subjected to accident scenarios of variable forces and durations. [Doc. 391; Exh. A, Davis report at 2-3; Doc. 447; Exh. A, Davis affidavit at 3].

From 1997 until 1978, Dr. Davis served as the general medical officer for the United States Public Health Service in orthopaedic surgery, emergency medicine, and obstetrics and gynecology at the Gallup Indian Medical Center. From 1978 until 1985, he was in private practice in the field of emergency medicine. From 1985 until 1988, Dr. Davis was in private practice in the area of occupational medicine, an area that involves the evaluation and treatment of injured workers, as well as causation analysis. Dr. Davis currently serves as

President of G. Theodore Davis MD & Associates, an organization that performs medical/legal consultation. Dr. Davis has postgraduate, continuing medical education in such areas as trauma, emergency medicine, and high-risk emergency medicine. He has provided both deposition and trial testimony in matters before such courts as the First, Second, Eighth, and Thirteenth Judicial District Courts (New Mexico); County Court of Charleston (South Carolina); and the United States District Court for the District of New Mexico. On the basis of these credentials, the Court concludes that Dr. Davis qualifies by education, training, and experience as an expert in the field of emergency medicine.

2. Dr. Davis' Opinion

The opinion that Dr. Davis would render—and that the Duran parties seek to exclude—is that Carol Duran and Robert Valencia immediately became unconscious and were killed instantaneously by the impact of the train. [Doc. 391 at 3.] As the opinion is stated in Dr. Davis' report:

Ms. Duran and Mr. Valencia ceased to be conscious and essentially died on impact as a consequence of instantaneous and irreversible blunt force trauma to vital organs and tissues, including brain, spinal cord and heart.

[Doc. 391-2 at 6.] This opinion is based on Dr. Davis' conclusion that: "At the moment of the collision of 11/6/06, the bodies of Ms. Duran and Mr. Valencia experienced essentially instantaneous and extreme acceleration forces that resulted in massive and fatal blunt force trauma to vital organs." [Doc. 391-2 at 6.]

Dr. Davis arrived at this opinion by examining information provided to him that: (1) the dump truck in which Ms. Duran was sitting was on the railroad tracks and perpendicular

to the direction of travel of the BNSF train; (2) the dump truck was stationary and the train was moving at approximately 63 miles per hour upon impact with the dump truck; (3) the passenger side of the dump truck was located directly in the path of the moving train and Ms. Duran was seated in the driver's position; and (4) Mr. Valencia was at the drivers side of the dump truck. [Doc. 391-2 at 4.]

Dr. Davis also considered that there was a marked difference between the mass of the dump truck and the mass of the BNSF train (which is estimated to weigh 6,578 tons) such that the bodies of Ms. Duran and Mr. Valencia experienced a change in velocity equivalent to the speed of the moving train upon impact. This "Delta V" or change in velocity, as it is described in the report, was thus approximately 63 miles per hour. [Doc. 391-2 at 4.]

Dr. Davis' report states that he examined peer-reviewed medical literature, as well as safety/engineering-related literature² that "provides a medical basis to support a conclusion that the magnitude and direction of force (i.e., in this case a lateral impact to the dump truck), that would have occurred in this type of accident were such that Ms. Duran and Mr. Valencia ceased to be conscious and essentially died on impact as a consequence of instantaneous and irreversible trauma to vital organs and tissues." [Doc. 391-2 at 4-5.] Dr. Davis concluded that the autopsy findings confirm that they sustained massive blunt force trauma at the moment the train collided with the dump truck. He further stated that there was no information in the file or cited literature that would provide a medical basis to conclude that

²The literature Dr. Davis consulted is listed in a lengthy footnote in his report. [Doc. 391-2 at 4-5.]

either Ms. Duran or Mr. Valencia would have remained conscious or aware of the fatal and essentially instantaneous injuries they sustained. [Doc. 391-2 at 6.]

C. The Duran Parties' Arguments

1. Qualifications

The Duran parties³ contend that Dr. Davis' opinion must be stricken because “[a]lthough Dr. Davis is a licensed physician and certified in emergency medicine, he admits in his deposition that he has no expertise in biomechanics or occupant kinematics.” [Doc. 391 at 5.] The Court disagrees.

The Duran parties' argument rests in part on a mischaracterization of Dr. Davis' opinion. Dr. Davis does not opine, as the Duran parties contend, that “the collision between the train and the truck must produce instant death.” [Doc. 391 at 5.] His opinion is that Ms. Duran and Mr. Valencia received instantaneous and irreversible blunt force trauma such that they ceased to be conscious upon impact and died essentially immediately. This opinion is rendered from a medical perspective as to the effect of sudden acceleration and massive blunt force trauma on the human body and consciousness. The Duran parties have offered no basis upon which to conclude that Dr. Davis is not qualified to opine on this topic. To the contrary, his medical credentials are undisputed, and the Duran parties concede that Dr. Davis is a licensed physician and certified in emergency medicine.

³ Through their *Second Notice of Joinder*, the Valencia parties join in the instant motion. [See Doc. 553 at 2 (“The Valencia Parties join[] in each and every motion, motion in limine, and each and every other affirmative or responsive pleading filed by the Duran Parties, and adopt[] by reference all such pleadings. . . .”)].

Accordingly, the Court finds that Dr. Davis is qualified to offer an opinion that Ms. Duran and Mr. Valencia experienced instantaneous and extreme acceleration forces that resulted in massive and fatal blunt force trauma to vital organs and that they ceased to be unconscious and died on impact as a consequence of such trauma. Dr. Davis is qualified to render this opinion because of his medical knowledge and training in the field of emergency medicine, and his understanding of the kinds of fatal and non-fatal traumatic conditions that can occur to the human body.

While it is true that Dr. Davis is not an expert in biomechanics or occupant kinematics, the Duran parties fail to show how this renders him unqualified to give a medical opinion regarding the effect on human consciousness of massive blunt force trauma such as would be sustained when a train moving at 63 miles per hour impacts stationary objects or people. Indeed, the Duran parties have not defined the terms “biomechanics” and “occupant kinematics”⁴ for the Court, nor explained why expertise in these specialties, in the context and the specific circumstances of this case, is necessary to determine whether the trauma suffered by Ms. Duran and Mr. Valencia rendered them instantaneously unconscious. Dr. Davis is not rendering an opinion on how the bodies of Ms. Duran and Mr. Valencia were positioned, nor how they may have moved upon impact. Accordingly, he is not required to possess expertise in biomechanics and occupant kinematics.

2. **Reliability**

⁴The Court garners from the record that these specialities relate to the mechanics of the movement of the human body and movement of occupants within a vehicle when forces are applied to the vehicle.

The Duran parties also attack Dr. Davis' opinion on the grounds that it does not satisfy Daubert's principles of reliability. They argue that the opinion is unreliable because Dr. Davis: (1) did not conduct any evaluation on occupant kinematics to determine how Ms. Duran's body moved at the moment the train impacted the truck; (2) did not evaluate the interior of the cab or go to the scene of the collision; (3) never performed any studies to support or verify his testimony that an acceleration range of Delta V 63 miles per hour will have an extreme effect on the body almost instantaneously; (4) did not calculate the Delta V himself; and (5) reached his conclusions and opinions solely by reading through literature written by others. [Doc. 391 at 6-7.]

The proponent of an expert "need not prove that the expert is undisputedly correct or that the expert's theory is 'generally accepted' in the scientific community." Mitchell v. Gencorp Inc., 165 F.3d 778, 781 (10th Cir. 1999) (citation omitted). "Instead, the [proponent] must show that the method employed by the expert in reach the conclusion is scientifically sound and that the opinion is based on facts that satisfy rule 702's reliability requirements." Goebel v. Denver & Rio Grande W. R.R Co., 346 F.3d 987, 991 (10th Cir. 2003).

The Court finds that the methodology Dr. Davis employed is reliable. Dr. Davis used a "clinical mechanism of injury" analysis to arrive at his opinion. [Doc. 447-2 at 5.] As illustrated in his report, he first reviewed file information regarding the circumstances of the accident (eastbound train traveling at 63 miles per hour striking stationary dump truck and persons directly in the path of the moving train). Second, he noted that the change in

velocity experienced by the individuals when they were struck by the train was equal to the velocity of the train (the persons were stationary when they were struck; the train was traveling at 63 miles per hour). Third, he consulted peer-reviewed medical literature and concluded that a medical basis exists to support the conclusion that the injuries caused by such an impact were of such a nature that the individuals sustaining them would immediately cease to be conscious and die essentially on impact. Fourth, he correlated the medical literature to the injuries actually sustained by Ms. Duran and Mr. Valencia, as described in autopsy reports, to confirm that they did indeed sustain massive blunt force trauma to vital organs. Fifth, he considered whether there was information available that would indicate that either Ms. Duran or Mr. Valencia remained conscious after the impact. And, sixth, he consulted with Brian Charles and Brian Lawson at Accident Reconstruction and Analysis to verify that his medical opinions and conclusions were consistent with accident reconstruction principles and concepts. [Doc. 391-2 at 4-6.]

None of the concerns raised by the Duran parties cause the Court to conclude that Dr. Davis' opinion is unreliable. Regarding the first two objections, though he did not conduct an evaluation of occupant kinematics, nor did he evaluate the interior of the cab or go to the scene of the collision, as explained above, he was not required to do so. He is not offering an opinion as to how the bodies of Ms. Duran and Mr. Valencia moved at the moment the train impacted the truck. He is instead offering a medical opinion based upon the known and verifiable injuries sustained by Ms. Duran and Mr. Valencia.

The Court is not persuaded by the Duran parties' claim that such an opinion "requires

quantification of the forces on their bodies during the specific incident.” [Doc. 489 at 6.] Here, both the cause of injury (massive blunt force and extreme instantaneous acceleration) and the injuries resulting therefrom (massive trauma to various vital organs) are known. The Duran autopsy revealed, among other injuries, “massive cranial disruption with avulsion of the brain; multiple fractures of the cranial vault, base of skull and atlanto-occipital area of the cervical spine.” The Valencia autopsy indicated “transection of the brain at the level of the brain stem; dislocation of the atlanto-occipital area of the cervical spine with associated odontoid process fracture.” [Doc. 391-2 at 5–6.]

Dr. Davis concludes in his report that these injuries, along with others, caused essentially instantaneous unconsciousness and death. How the bodies of Ms. Duran and Mr. Valencia may have moved upon impact would appear to add little to the analysis, from a medical perspective, and under the circumstances of this case. In light of Dr. Davis’ qualifications as a board-certified emergency and trauma physician, the Duran parties have failed to explain why knowledge of the injury patterns in this case is not a sufficient basis on which to formulate an opinion as to whether unconsciousness was instantaneous. The Court thus concludes that the absence of biomedical and occupant kinematics evaluations does not render Dr. Davis’ method or conclusions unreliable.

The Court also is not persuaded, regarding the third objection, that his opinion is unreliable on the grounds that he never performed any studies to support or verify his testimony that an acceleration range of Delta V 63 miles per hour will have an extreme effect on the body almost instantaneously. An expert is not always required to test his theory

before the Court can find the conclusions reliable. Bitler v. A.O. Smith Corp., 400 F.3d 1227, 1235 (10th Cir. 2004). Testing is most appropriate when the theory is novel or purports to modify well-established knowledge. Bitler, 400 F.3d at 1235–36.

In this case, the Court concludes there was no need to test Dr. Davis' theory that a Delta V of 63 miles per hour will have an extreme effect on the body almost instantaneously. First, we are not dealing with conclusions that are particularly novel or counter-intuitive. That a collision between a train traveling 63 miles per hour and a stationary truck and people would produce devastating injuries of the kind that can cause immediate unconsciousness and could be instantaneously fatal is not a surprising conclusion. Furthermore, Dr. Davis is not purporting to formulate a theory or to explain how the injuries occurred. In this context, the injuries are known and were produced by a known event. His inquiry is directed to the question whether these known circumstances and injuries would produce unconsciousness instantaneously. To answer the question, Dr. Davis consulted peer-reviewed literature and correlated the literature to the injuries actually sustained by Ms. Duran and Mr. Valencia. The Court finds that he did not have to conduct independent tests in addition to these steps.

The Duran parties' fourth objection—that Dr. Davis' opinion is unreliable because he did not calculate the Delta V himself—also is without merit. The Delta V is the change in velocity that Ms. Duran and Mr. Valencia experienced upon impact. A precise calculation of the Delta V, however, is not the object of Dr. Davis' opinion. The relevant portion of the analysis is that “the bodies of Ms. Duran and Mr. Valencia experienced essentially instantaneous and extreme acceleration at the moment of impact.” [Doc. 391-2 at 4.] Dr.

Davis explained that basis for relying on a Delta V of 63 miles per hour is that “there was a marked difference between the mass of the stationary but loaded dump truck and the moving BNSF train such that the delta V, or change in velocity at the time of the collision, was 63 mph (i.e., the speed of the BNSF train).” [Id.] This appears to be a relatively straightforward conclusion given that the train reportedly was traveling at 63 miles per hour and the dump truck and the individuals were stationary. The Delta V in this case is simply one way of expressing the concept that the mass and velocity of the train were so much greater than the mass of the truck and people, that they began moving at the same speed as the train upon impact.

Dr. Davis’ reliance on peer-reviewed literature, the Duran parties fifth objection, also is not a basis to find his opinion unreliable. Use of peer-reviewed literature is, to the contrary, accepted methodology in the medical community. See Benedi v. McNeil-P.P.C., Inc., 66 F.3d 1378, 1384 (4th Cir. 1995). In the absence of any allegations that the literature relied upon by Dr. Davis is itself suspect, or that it does not support his conclusions, the Court will not exclude Dr. Davis’ testimony on the grounds that he relied on peer-reviewed literature.

Finally, the Duran parties argue in their reply brief that the cases relied upon by BNSF in opposing the motion are distinguishable because the cases each involve the testimony of physicians who actually treated the decedents. [Doc. 489 at 4.] The Court has reached its conclusion in this case independently of the cases cited by BNSF (most of which appear to be state court cases). Accordingly, there is no need to address this argument.

III. CONCLUSION

For the reasons set forth more fully above, the Court will deny *The Duran Parties'* *Motion to Preclude Opinions of Theodore Davis, M.D. as Beyond his Qualifications*. As always, these pretrial evidentiary rulings are subject to reconsideration in the event that unforeseen circumstances or a change in context should arise during the trial.

IT IS, THEREFORE, ORDERED that *The Duran Parties' Motion to Preclude Opinions of Theodore Davis, M.D. as Beyond his Qualifications* [Doc. 391], filed August 25, 2008 is **DENIED**;

IT IS FURTHER ORDERED that the pretrial evidentiary rulings set forth herein are subject to reconsideration in the event that unforeseen circumstances or a change in context should arise during the trial.

SO ORDERED this 3rd day of February, 2009, in Albuquerque, New Mexico.



M. CHRISTINA ARMIJO
United States District Judge